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| APPLICATION NO. | FILING DATE | FIRST NAMED INVENTOR | ATTORNEY DOCKET NO. | CONFIRMATION NO. |
|-------------------------|-------------|----------------------|---------------------|------------------|
| 09/023,259 | 02/13/1998 | WALLACE A. RITCHIE | 101102-0002 | 6726 |
| 24267 | 7590 | 05/02/2006 | EXAMINER | |
| CESARI AND MCKENNA, LLP | | | HAN, QI | |
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| BOSTON, MA 02210 | | | ART UNIT | PAPER NUMBER |
| | | | 2626 | |

DATE MAILED: 05/02/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

| | | |
|------------------------------|--------------------|------------------|
| Office Action Summary | Application No. | Applicant(s) |
| | 09/023,259 | RITCHIE ET AL. |
| | Examiner Qi Han | Art Unit 2626 |

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1) Responsive to communication(s) filed on 09 March 2006.

2a) This action is FINAL. 2b) This action is non-final.

3) Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4) Claim(s) 1-24 is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5) Claim(s) _____ is/are allowed.

6) Claim(s) 1-24 is/are rejected.

7) Claim(s) _____ is/are objected to.

8) Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9) The specification is objected to by the Examiner.

10) The drawing(s) filed on _____ is/are: a) accepted or b) objected to by the Examiner.
Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11) The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12) Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a) All b) Some * c) None of:

1. Certified copies of the priority documents have been received.
2. Certified copies of the priority documents have been received in Application No. _____.
3. Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

| | |
|---|---|
| 1) <input type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____. |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____. | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| | 6) <input type="checkbox"/> Other: _____. |

DETAILED ACTION

1. The text of those sections of Title 35, U.S. Code not included in this action can be found in a prior Office action.

Response to Amendment

2. This communication is responsive to the applicant's amendment dated 03/09/2006. The Applicant(s) amended claims 1 and 9, and added new claims 22-24 (see the amendment: pages 2-7).

The examiner withdraws the claim rejection under 35 USC 112 2nd, because the applicant amended the claim.

Response to Arguments

3. Applicant's arguments filed on 03/09/2006 with respect to rejection of claims 1-24 under 35 USC 103 (see the amendment: pages 8-12) have been fully considered but are moot in view of the new ground(s) of rejection. It is noted that even though the amended and/or added claims introduce new issue and/or change the scope of the claims, the previous recited references are still applicable to the claims for the rejection in this office action, based on broadest reasonable interpretation of the claims (see detail in the claim rejection below).

4. In response to applicant's arguments regarding the rejection of claim 1 (the amendment: pages 8-11) that the prior art (Lakritz) "is based on the correct writing of the ideograph to be

identified" (amendment: page 9, paragraph 5) and "do not render applicant's invention obvious because of the absence from either patent of the concept of analyzing the stroke sequence entered and the frequency with which a chosen component of a character related to other previously submitted selections" (amendment: page 11, paragraph 2), and Wang's (secondary reference) "statement does not explain how the number of stroke or the frequency would be used and does not even suggest using the order (or sequence)..." and even when combining Lakritz and Wang, the applicant's invention of using sequence of strokes, with the frequency of occurrence of a character, is not disclosed, taught, or suggested" (amendment: page 11, paragraph 3), the examiner respectfully disagrees with applicant's arguments and has a different view of the prior art teachings and the claim interpretations.

It is noted that, even though Lakritz's invention does not use sequence of strokes, he teaches, in the section of "background of the invention" of the patent, that 'specialized input methods' by using 'specific sequence of strokes' are well known in the art (col. 3, lines 27-35) (see detail in the claim rejection). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to combine variety of teachings of Lakritz by providing the specialized input method by using stroke sequences (order) for inputting ideograph characters, for the purpose of better identifying the ideograph (character) for the input (Lakritz: col. 3, lines 27-34). Lakritz also suggests that if one has mastered the writing of the ideographic script, the one can effectively use the system by employing sequence of strokes for inputting ideograph characters (col. 3, lines 35-36).

It is also noted that the test for obviousness is not whether the features of a secondary reference may be bodily incorporated into the structure of the primary reference; nor is it that the

claimed invention must be expressly suggested in any one or all of the references. Rather, the test is what the combined teachings of the references would have suggested to those of ordinary skill in the art. See *In re Keller*, 642 F.2d 413, 208 USPQ 871 (CCPA 1981). In this case, as stated in the claim rejection, Lakritz does not expressly disclose using “(2) the frequency of occurrence of said character as the first character of a word with respect to an operator's language”. However, the feature is well known in the art as evidenced by Wang who teaches increment ideographic character input method (title), comprising providing hypotheses according to ‘the frequency of occurrence of the character’ (col. 23, line 6 to col. 24, line 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lakritz by specifically providing hypotheses based on the frequency of occurrence of the character, as taught by Wang, for the purpose of offering additional criteria used for ordering hypotheses list (Wang: col. 23, lines 6-7).

Regarding other claims, the response is base on the same reason as stated for claim 1 (see above), because there is no other specific argument or separate issue for other claim rejection(s).

For above reason, the examiner believes the rejection based on the combined references covers all limitations as claimed and provides proper obviousness/motivation for combining the references (see detail below), and the applicant's arguments are not persuasive.

Claim Rejections - 35 USC § 103

5. Claims 1, 6-8, 11 and 21-24 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lakritz et al. (US 5,586,198) hereinafter referenced as Lakritz, in view of Wang et al. (US 5,926, 566) hereinafter referenced as Wang.

As per **claim 1**, Lakritz discloses method and apparatus for identifying characters in ideographic alphabet (title), comprising:

“selecting information from the group consisting of a stroke, a component and a character” (col. 5, line 61 to col. 6, line 18, ‘selected radical (component)’; col. 7, lines 1-11 and Fig. 5, shows ‘stroke’, ‘radical’ and ‘character’ in groups; col. 8, lines 1-15);

“storage of data related to the properties of Chinese characters and compounds” and “storage comprises data related to component parts of a Chinese character” (col. 4, lines 26-33, ‘Chinese alphabet’, ‘ideographic descriptions in maintained (stored) in a database...’), “said data selected from the group consisting of (1) the identification [and order of strokes used to draw said character], said strokes being in accordance with a selected classification scheme”, (col. 6, lines 1-17, ‘as the user drags (select) additional radicals to the canvas, constructing a more specific or complete form of the desired character, the number of matches shown in the selection window decreases’, ‘identification of the desired character’), “(3) the orthographic components of said character [in drawing order]” (col. 6, line 67 and Fig.3, ‘radicals (interpreted as orthographic components)'), “and (4) indicators of said character's membership within various subsets of Chinese characters” (col. 7, lines 1-13 and Figs. 3 and 5, ‘indicated by numeric designator (indicator)’);

“means for process of said input information [being based upon an order of strokes used to draw said character] for retrieving Chinese characters and compounds [based upon said stroke sequence,] said process means including a plurality of Chinese character encoding processes based on said stored data”, (col., 6, lines 51-65, ‘graphical user interface’, ‘mouse (input means)’, ‘ideographic description database’; Figs. 1-3, shows character table and component

table in block 10 and/or 14 having possible inputting strokes, components and characters (candidates), and expending input by selecting strokes, components and/or characters); and

“means for display providing indication of correspondence between elements of said means for input and said display; wherein further character selection information is suggested in response to said input” (col., 6, lines 20-45, ‘kanji radicals’, ‘resulting in the display of a corresponding selection window 14 (including suggested selection information)’, ‘indicated by numeric designator 17’, ‘after additional radicals have been dragged... narrow the number of matches displayed in the selection window’, which read on further character selection information is suggested).

But, Lakritz does not expressly disclose employing “order of strokes used to draw said character”, inputting information being “based upon an order of strokes used to draw said character” and “compounds based upon said stroke sequence” for retrieving Chinese characters. However, the feature is well known in the art as evidenced by Wang Lakritz himself who teaches, in section of ‘background of the invention’ of the patent, that ‘specialized input method’ by using ‘specific sequence (order) of strokes’ for ‘ideographic characters’ is well known feature in the art, in which ‘this sequence is matched to a set of possible corresponding ideographs (candidates of characters or components)’ and ‘the matrix senses stroke starting point and stroke sequences based on the correct writing (order of strokes used to draw said character) of the ideograph to be identified’ (col. 3, lines 27-35), which also suggests that the system has capability of using the components in drawing order because the component, such as radical, inherently uses the same drawing order as that of strokes for the characters. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to

combine variety of teachings of Lakritz by providing the specialized input method by using stroke sequences (order) based on correct writing of the ideograph (including stroke and component drawing order), for the purpose of better identifying the ideograph (character) for the input (Lakritz: col. 3, lines 27-34).

Further, Lakritz does not expressly disclose using “(2) the frequency of occurrence of said character as the first character of a word with respect to an operator's language”. However, the feature is well known in the art as evidenced by Wang who teaches increment ideographic character input method (title), comprising providing hypotheses according to ‘the frequency of occurrence of the character’ (col. 23, line 6 to col. 24, line 2). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lakritz by specifically providing hypotheses based on the frequency of occurrence of the character, as taught by Wang, for the purpose of offering additional criteria used for ordering hypotheses list (Wang: col. 23, lines 6-7).

As per **claim 6** (depending on claim 1), the rejection is based on the same reason described for claim 1, because the rejection for claim 1 covers the same or similar limitation(s) of claim 6.

As per **claim 7** (depending on claim 1), the rejection is based on the same reason described for claim 1, because the rejection for claim 1 covers the same or similar limitation(s) of claim 1, wherein the radical in the cited reference(s) is reasonably interpreted as the orthographic component in the claim.

As per **claim 8** (depending on claim 7), Lakritz in view of Wang further discloses “a component comprised of fundamental strokes and a component comprised of a plurality of subcomponents” (Lakritz: Figs. 2-3, blocks 10, 12).

As per **claim 11**, it recites method for inputting Chinese character. The rejection is based on the same reason described for claim 1, because the claim recites the same or similar limitation(s) as claim 1.

As per **claim 21** (depending on claim 13), the rejection is based on the same reason described for claim 6, because the claim recites the same or similar limitation(s) as claim 6.

As per **claim 22**, it recites a computer-readable medium for input of Chinese characters. The rejection is based on the same reason described for claim 1, because the rejection for claim 1 covers the same or similar limitation(s) as claim 22.

As per **claim 23** (depending on claim 22), Lakritz in view of Wang further discloses “character candidates and said component candidates are presented in a first area on said display means” (Figs. 1-3, block 10),

“means for presenting a stroke input through the input means in a second area on said display means”, (Lakritz: Figs 1-3, block 12);

“means for replacing the strokes being presented in the second area by a component input through the input means”, (Figs 1-3, blocks 10, 12 and 14); and

“means for clearing the contents of the second area, and presenting a character input through the input means in a third area on said display means”, (Figs 2-3, blocks 12 and 14).

As per **claim 24**, it recites method for inputting Chinese characters. The rejection is based on the same reason described for claim 22, because the claim recites the same or similar limitation(s) as claim 22.

6. Claims 2, 12-13 and 17-18 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lakritz in view of Wang as applied to claim 1, and further in view of Freeman (US 5,649,223).

As per **claim 2** (depending on claim 1), Lakritz in view of Wang does not expressly disclose “said means for input is selected from the group consisting of a keyboard and a touchscreen”. However, the feature is well known in the art as evidenced by Freeman who discloses word based text producing system (title), comprising ‘keyboard 11’ and ‘non-keyboard apparatus such as … a touch sensitive screen’ for the stroke input system (col. 7, lines 15-28). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lakritz in view of Wang by providing keyboard and non-keyboard apparatus such as a touch sensitive screen for input, as taught by Freeman, for the purpose of enabling user to type easier and faster, or enabling rapid and easy input of text by persons without keyboard skills (Freeman: col. 3, lines 43-52).

As per **claim 12** (depending on claim 1), Lakritz in view of Wang does not expressly disclose “selection of said non word associated character automatically appends a word separator”. However, the feature is well known in the art as evidenced by Freeman who further discloses ‘selected words… are outputted by input actions which may append 'Space' or other punctuation endings’ (abstract and col. 5, lines 6-18). Therefore, it would have been obvious to

one of ordinary skill in the art at the time the invention was made to modify Lakritz in view of Wang by providing selection of non word such as space or punctuation as separator, as taught by Freeman, for the purpose of enabling user to type easier and faster, or enabling rapid and easy input of text by persons without keyboard skills (Freeman: col. 3, lines 43-52).

As per **claim 13** (depending on claim 11), Lakritz in view of Wang and Freeman further discloses “selecting information from the group consisting of a stroke, a component and a character” (Lakritz: Figs. 2-3; Freeman: col. 16, lines 60-62, ‘strokes, radicals... ideographic character’).

As per **claim 17** (depending on claim 13), Lakritz in view of Wang and Freeman further discloses that “providing a component that is orthographic” (Lakritz: Figs. 2-3 and col. 6, line 67, ‘radicals (interpreted as orthographic components)’).

As per **claim 18** (depending on claim 13), the rejection is based on the same reason described for claim 8, because the claim recites the same or similar limitation(s) as claim 8.

7. Claims 3-4 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lakritz in view of Wang and Freeman as applied to claim 2, and further in view of well known prior art (MPEP 2144.03).

As per **claim 3** (depending on claim 2), Lakritz in view of Wang and Freeman further discloses “a virtual keyboard comprising a representation of keys, each said key representation assigned to selection of a stroke, a component or a character” and “a special function key (Freeman: col. 7, line 20, ‘virtual keyboard (includes function keys)’; col. 2, lines 37-38, ‘display functions responsive to function key operation’; col. 16, lines 53-62, ‘Chinese’ ‘other non-

alphabetic languages', 'strokes, radicals... ideographic character'). But, Lakritz in view of Wang and Freeman does not expressly disclose "a special function key selected from the group consisting of **a more key and a wild card key**". However, an official notice is taken that the feature or the equivalent functionality of using a more key and a wild card key for input is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lakritz in view of Wang and Freeman by specifically providing the feature or the equivalent functionality of using a more key and a wild card key for input, for the purpose (motivation) of enabling user to type easier and faster, or enabling rapid and easy input of text by persons without keyboard skills (Freeman: col. 3, lines 43-52).

As per **claim 4** (depending on claim 2), the rejection is based on the same reason described for claim 3, because the claim recites the same or similar limitation(s) as claim 3.

8. Claims 9-10 and 19-20 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lakritz in view of Wang as applied to claims 1 and 13, and further in view of well known prior art (MPEP 2144.03).

As per **claim 9** (depending on claim 1), Lakritz in view of Wang further discloses "an order for the display of the next drawn candidate is based on the previous selection" (Lakritz: col. 3, lines 30-34, 'sequence of strokes' 'stroke sequences based on the correct writing of ideograph'; col. 6, lines 33-36, 'additional radical...narrow the number of matches displayed in the selection window'). But, Lakritz in view of Wang and Freeman does not expressly disclose "the order for the display of component candidates is based on the cumulative frequencies of all possible Chinese characters". However, an official notice is taken that this feature of providing

ordered component candidates based on cumulative or total frequencies of possible Chinese character is well known in the art. Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify Lakritz in view of Wang by specifically providing ordered component candidates based on cumulative or total frequencies of possible Chinese character, for the purpose (motivation) of offering additional criteria used for ordering hypotheses list (Wang: col. 23, lines 6-7).

As per **claim 10** (depending on claim 9), the rejection is based on the same reason described for claim 9, because the rejection for claim 9 covers the same or similar limitation(s) as claim 10, wherein cumulative frequencies is necessarily altered after entering (operation) a stroke or radical.

As per **claims 19-20** (depending on claim 13), the rejection is based on the same reason described for claims 9-10 respectively, because the claims recite the same or similar limitation(s) as claims 9-10 respectively.

Conclusion

9. Applicant's amendment necessitated the new ground(s) of rejection presented in this Office action. Accordingly, **THIS ACTION IS MADE FINAL**. See MPEP § 706.07(a). Applicant is reminded of the extension of time policy as set forth in 37 CFR 1.136(a). A shortened statutory period for reply to this final action is set to expire THREE MONTHS from the mailing date of this action. In the event a first reply is filed within TWO MONTHS of the mailing date of this final action and the advisory action is not mailed until after the end of the THREE-MONTH shortened statutory period, then the shortened statutory period will expire on

the date the advisory action is mailed, and any extension fee pursuant to 37 CFR 1.136(a) will be calculated from the mailing date of the advisory action. In no event, however, will the statutory period for reply expire later than SIX MONTHS from the date of this final action.

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Any inquiry concerning this communication or earlier communications from the examiner should be directed to Qi Han whose telephone numbers is (571) 272-7604. The examiner can normally be reached on Monday through Thursday from 9:00 a.m. to 7:00 p.m. If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Richemond Dorvil, can be reached on (571) 272-7602.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Inquiries regarding the status of submissions relating to an application or questions on the Private PAIR system should be directed to the Electronic Business Center (EBC) at 866-217-9197 (toll-free) or 703-305-3028 between the hours of 6 a.m. and midnight Monday through Friday EST, or by e-mail at: ebc@uspto.gov. For general information about the PAIR system, see <http://pair-direct.uspto.gov>.

QH/qh
April 19, 2006



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SUPERVISORY PATENT EXAMINER